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<p>(21) International Application Number: PCT/US85/00569 (22) International Filing Date: 3 April 1985 (03.04.85) (31) Priority Application Number: 596,521 (32) Priority Date: 4 April 1984 (04.04.84) (33) Priority Country: US (71)(72) Applicant and Inventor: FAST, Jacob [US/US]; 7561 N.W. 9th Street, Plantation, FL 33317 (US). (74) Agents: STERN, Marvin, R. et al.; Holman & Stern, 2401 Fifteenth Street, N.W., Washington, DC 20009 (US). (81) Designated States: AT (European patent), AU, BE (European patent), CH (European patent), DE (European patent), FR (European patent), GB (European patent), IT (European patent), JP, LU (European patent), NL (European patent), SE (European patent).</p>		<p>Published With international search report.</p>
<p>(54) Title: STRIP MERCHANDISER</p> <p>(57) Abstract</p> <p>An integral unit (10) for suspending one or more apertured items for display forwardly of a display shelf is arranged to be secured to the shelf and, alternatively, to a hook which is secured to the shelf. The unit is an integral flexible plastic strip and includes a mounting portion (12) which joins an item-supporting portion (13) at a transversely extending fold line (11). The upper edge of the mounting portion includes an anchor (16) adapted to be resiliently inserted and interlock in a hole (31) in a display shelf so as to engage the shelf for purposes of mounting. A through hole (40) in the mounting portion permits the strip to be suspended from a hook (41). One side of the mounting portion may be adhesively coated (50) for a further alternative manner of securing the strip to the shelf. The item-supporting portion has one or more finger-like hook members (21) defined by inverted U-shaped die-cuts in the strip. The finger-like hook members are vertically aligned to support the apertured items for display.</p>		

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1 STRIP MERCHANDISER

2 BACKGROUND OF THE INVENTIONS3 1. Technical Field

4 The present invention relates to articles of
5 manufacture suitable for supporting apertured items for
6 display. More particularly, the present invention
7 relates to support members for displayed items, which
8 members can be suspended forwardly of a display shelf.
9 The displayed items generally take the form of blister

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1 packs, apertured sheets of promotional material, and the
2 like, but are not so limited.

3 2. Discussion of the Prior Art

4 Apertured items such a blister packs, and the like,
5 are generally suspended forwardly of a display shelf on
6 which other items for display are supported. The
7 apertured items may be suspended one-behind-the-other
8 from a common hook-like member, such as the well known
9 J-hook. The J-hook, although widely used, can be
10 somewhat disadvantageous since it projects considerably
11 forward of the shelf into an aisle traveled by shoppers.
12 The projecting J-hook can thus cause injury or damage to
13 the person or clothing of the shoppers.

14 An alternative to the J-hook is the clip-strip,
15 such as described and illustrated in my U.S. Patent No.
16 4,476,983 and entitled "Support Hook and Assembly for
17 Merchandising Display". The clip-strip is suspended from
18 the forward edge of a display shelf and supports items
19 for display one above the other. This arrangement

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1 greatly reduces the danger to passing shoppers. However,
2 the clip-strip requires a separate structure in order to
3 attach it to the display shelf, thereby increasing its
4 costs.

5 In my afore-mentioned U.S. Patent No. 4,483,502, I
6 disclosed a unit for supporting apertured items, such as
7 blister packs, which unit is adapted to be supported on a
8 lower ledge of a price molding or similar forward facing
9 edge of a display shelf. Specifically, that unit
10 includes a flexible tag-like mounting portion having a
11 bottom support edge divided into two
12 longitudinally-spaced and alignable edge segments. The
13 edge segments are adapted to rest on a lower ledge formed
14 in the forward edge of a display shelf. If the shelf
15 forward ledge is a price molding, the tag-like mounting
16 portion is flexed about an axis disposed parallel to the
17 edge segments so that the upper edge of the mounting
18 portion engages the upper ledge of the price molding and
19 the mounting portion is secured by flexible engagement to
20 the price molding. Alternatively, the back of the
21 mounting portion may be provided with an adhesive backing
22 to hold the mounting portion in place with the edge
23 segments resting on the lower shelf ledge.

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1 The support unit of my aforesaid patent application
2 further includes an integral item-supporting portion in
3 the form of a strip or flap member which extends through
4 the space between the edge segments of the mounting
5 portion. The flap includes one or more finger-like
6 support hooks which are die cut so as to be bent or
7 flexed out of the plane of the flap or strip so that one
8 or more apertured items may be suspended from the hooks.
9 In one embodiment, the hooks are arranged
10 one-above-the-other and are contoured arcuately in a
11 dimension transverse to their lengths to impart strength
12 thereto. In another embodiment, the hook has a bi-winged
13 tip which is flexibly foldable to permit it to be
14 inserted into an aperture of a display item. The wings
15 resiliently unfold to lock the item onto the hook. This
16 latter arrangement is suitable for promotional paper
17 sheets which can be placed on the hook in stacks and then
18 individually torn off the hook by shoppers.

19 Although the support unit described in my
20 afore-mentioned U.S. Patent No. 4,483,502 is quite
21 effective for displaying merchandise forwardly of a
22 shelf, it is only applicable to display shelves which
23 have a bottom ledge on their forward facing edges.

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1 For shelves having no such ledge, the support unit cannot
2 be properly mounted without adhesive, or the like.

3 OBJECTS AND SUMMARY OF THE INVENTION

4 It is therefore an object of the present invention
5 to provide a unit for supporting apertured items, such as
6 blister packs, promotional material, etc., forwardly of a
7 display shelf without projecting dangerously far in front
8 of the shelf, and without requiring the shelf to include
9 a ledge on its forward edge for supporting the unit.

10 It is another object of the present invention to
11 provide a unit for supporting items for display by
12 suspending the items from a display shelf, which unit is
13 simple and inexpensive to manufacture, but is simply and
14 quickly deployed.

15 It is still another object of the present invention
16 to provide an integrally formed flexible plastic member
17 which can readily be supported on a display shelf even if
18 that shelf does not have a ledge on its forward-facing
19 edge, and which can itself support one or more apertured
20 items immediately forward of the shelf.

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1 Still another object of the present invention is to
2 provide an integrally formed flexible plastic member
3 which supports apertured items for display and which can
4 be secured to a display shelf in alternative manners such
5 as interlock engagement with the shelf via holes in the
6 shelf, adhesive attachment to the shelf, or by an
7 intermediate hook which engages both the shelf and the
8 unit.

9 In accordance with the present invention, a
10 merchandise support unit is constructed as an integrally
11 formed elongated plastic strip subdivided into a mounting
12 portion and an article-supporting portion by a
13 transversely-extending fold line. The mounting portion
14 is a generally rectangular flap having an anchor
15 extending from its upper edge remote from the fold line.
16 The anchor includes a proximal end integrally joined to
17 the upper edge of the flap, a distal anchor end, and an
18 intermediate portion. The anchor end may take the form
19 of an arrowhead pointing away from the mounting flap with
20 the wings of the arrowhead spaced more widely than the
21 width of the intermediate portion and more widely than
22 the diameter or other dimension of a standard hole or
23 aperture defined in merchandise display shelves. Anchor
24 fold lines are defined in the arrowhead to permit the

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1 wings to be resiliently folded out of plane and inserted
2 into the hole in the display shelf. Once thusly
3 inserted, the wings are released and unflexed and engage
4 the bottom of the shelf to prevent inadvertent withdrawal
5 of the anchor from the shelf hole. Alternatively, the
6 arrowhead may be eliminated in which case the anchor takes
7 the form of a tab which is frictionally engaged in the
8 shelf hole. The strip may be folded on the transverse
9 fold line so that the mounting flap resides horizontally
10 along the top surface of the display shelf, and so that
11 the item-supporting portion is suspended forwardly of the
12 shelf.

13 The mounting flap is also provided with an aperture
14 to permit alternative mounting without folding from a
15 hook which is adapted to engage a display shelf hole.
16 The shelf-facing side of the mounting flap may be coated
17 with adhesive to provide a still further mounting
18 alternative which is particularly adaptable for use with
19 display shelves having no holes.

20 The item-supporting portion of the strip may take
21 any of the forms described and illustrated in my
22 afore-mentioned U.S. Patent No. 4,483,502.

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1 BRIEF DESCRIPTION OF THE DRAWINGS

2 The above and still further objects, features and
3 advantages of the present invention will become apparent
4 upon consideration of the following detailed description
5 of specific embodiments thereof, especially when taken in
6 conjunction with the accompanying drawings wherein
7 similar elements in the various figures are designated by
8 the same reference numerals, and wherein:

9 Figure 1 is a broken view in plan of a merchandise
10 support strip constructed in accordance with the
11 principles of the present invention;

12 Figure 2 is a view in perspective of the strip of
13 Figure 1 shown secured to a display shelf and supporting
14 apertured items for display;

15 Figure 3 is a view in perspective showing the
16 support strip of Figure 1 with an alternative mounting
17 arrangement with respect to a display shelf; and

18 Figure 4 is a view in perspective of the strip of
19 Figure 1 showing a further alternative mounting
20 arrangement with respect to a display shelf.

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DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring specifically to Figure 1 of the accompanying drawings, a support member for display items includes an integrally formed elongated plastic strip having various die-cuts and fold lines defined therein. A transversely extending fold line 11 is provided proximate the upper end of the strip to subdivide the strip into a mounting portion 12 and an item-supporting portion 13. The mounting portion 12, which is considerably smaller in length than the item-supporting portion, is generally rectangular with an upper edge 14 disposed remotely opposite the fold line 11. An anchor member projects from upper edge 14 away from the fold line 11 and includes a stem portion 15 and a distal end 16 in the form of an arrowhead. The wings 17 and 18 of the arrowhead 16 extend transversely beyond the sides of stem portion 15 and are defined by fold lines 19 and 20 which extend from the distal apex of the arrowhead to the termination of the sides of stem portion 15. Fold lines 19 and 20 permit the wings 17 and 18, respectively, to be folded out of plane with respect to stem portion 15 and the remainder of the arrowhead. The plastic material utilized for the strip is preferably sufficiently resilient to permit the wings 17, 18 to return to their

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1 unfolded position, or substantially unfolded position,
2 after being folded and then released. Fold line 11, on
3 the other hand, is intended to permit the mounting
4 portion 12 to be maintained in a substantially
5 perpendicular orientation with respect to the item-
6 supporting portion 13.

7 The item-supporting portion 13 is provided with a
8 plurality of longitudinally spaced and aligned inverted
9 U-shaped die-cuts which define respective support hooks
10 or fingers 21,22,23,24, etc. The fingers or hooks 21-24
11 may be flexed out-of-plane with respect to the
12 item-supporting portion 13 of the strip so that the
13 distal ends of the fingers 21-24 are spaced from the
14 strip. In this manner, an apertured item may be
15 suspended from each finger 21-24.

16 The strip of Figure 1 is shown deployed in one
17 possible mounting arrangement in Figure 2, to which
18 specific reference is now made. Specifically, the strip
19 10 is shown secured to the top or horizontal surface of a
20 merchandise display shelf 30. Shelf 30 is provided with
21 a plurality of holes 31 defined through the top surface
22 thereof. The holes 31 are illustrated as being of
23 circular configuration, although it is to be understood

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1 that other shaped holes, such as diamond-shaped,
2 square-shaped, etc., are also used in such shelves and
3 are equally applicable for utilization with the present
4 invention. The strip 10 is secured to shelf 30 by
5 folding the wings 17 and 18 along respective fold lines
6 19 and 20 so that the anchor 16 may be inserted into one
7 of the holes 31 which is disposed near the forward edge
8 of the shelf. Once the resilient anchor has been
9 inserted into the hole, the wings are spread once again
10 to engage the underside of the shelf and prevent
11 inadvertent removal of the anchor through the hole 31.
12 The strip 10 may then be folded along transverse fold
13 line 11 so that the fold line resides at or forwardly of
14 the forward edge of the shelf. The fold which is made
15 along fold line 11 is at a right angle so that the
16 item-supporting portion 13 of the strip is suspended
17 downwardly in front of the shelf. Individual apertured
18 display items 32, 33, etc. are then placed on the sup-
19 port fingers 21, etc., one-above-the-other, so that the
20 items are suspended and displayed forwardly of shelf 30.

21 As illustrated in Figure 2, the mounting portion 12
22 may be provided with a through hole 40 which serves as an
23 alternative mounting arrangement. Specifically, this

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1 alternative mounting arrangement is illustrated in
2 greater detail in Figure 3 wherein a generally S-shaped
3 support hook has one end inserted in a hole 31 of a
4 merchandise display shelf 30 such that the opposite end
5 of the hook 41 is suspended forwardly of the shelf. The
6 opposite end of hook 41 is inserted through the mounting
7 hole 40 defined in the mounting portion 12 of the strip.
8 For purposes of preserving clarity of the illustration of
9 this mounting arrangement, the anchor 16 and stem 15 have
10 been omitted from the drawing of Figure 3. In this
11 mounting arrangement the strip 10 is not necessarily
12 folded along transverse fold line 11 but instead may be
13 suspended as shown in Figure 3.

14 A further alternative mounting arrangement for
15 strip 10 involves adhesively coating the underside of the
16 mounting portion 12 so that the mounting portion may be
17 secured to shelves which do not include mounting holes
18 31. For example, the underside of mounting portion 12 as
19 illustrated in Figure 2 may be adhesively coated at 50 to
20 thereby eliminate the need for inserting the anchor 16
21 into a mounting hole 31. Alternatively, the adhesive
22 coating 50 may be employed to permit the mounting portion
23 12 to be secured to a vertically-extending surface 51 in
24 the manner illustrated in Figure 4. It should be noted

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1 that, for purposes of illustrative clarity, the anchor 16
2 is not illustrated in the embodiment illustrated in
3 Figure 4.

4 The merchandise support strip described and
5 illustrated herein has the flexibility of three
6 alternative mounting arrangements, namely: (1) inter-
7 locking the strip to a support hole in a shelf by means
8 of anchor 16; (2) suspending the strip from a shelf by
9 means of a hook 41 inserted through mounting hole 40; and
10 (3) adhesively securing the mounting portion to a
11 horizontal or vertical surface of a shelf or other
12 support structure. The item-supporting portion 13 may be
13 configured in the manner illustrated herein or in the
14 manner illustrated and described in my afore-mentioned
15 U.S. Patent No. 4,483,502.

16 The particular configuration of the anchor 16 as
17 illustrated and described herein is not to be construed
18 as limiting the scope of the present invention.
19 Specifically, the anchor need not be configured as an
20 arrowhead but instead may have any general configuration
21 which is larger than the mounting holes 30 in a support
22 shelf but which can be squeezed to permit insertion into
23 such support holes for subsequent anchoring or frictional

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1 engagement therein. In this regard, the wings 17 and 18,
2 although providing an advantageous anchoring function by
3 engaging the underside of the display shelf, may be
4 dispensed with, in which case the frictional engagement
5 of the anchor member in mounting hole 31 would supply the
6 necessary mounting for the strip. Thus, even a rounded
7 edge of stem 15, without the arrowhead, may be inserted
8 into the mounting hole 31 by flexing the stem 15
9 lengthwise; upon release of the flexure force, the sides
10 of the stem engage the holes 31 and prevent inadvertent
11 withdrawal of the anchor member therefrom.

12 While I have described and illustrated various
13 specific embodiments of my invention, it will be clear
14 that variations from the details of construction which
15 are specifically illustrated and described may resorted
16 to without departing from the true spirit and scope of
17 the invention as defined in the appended claims.

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1 WHAT IS CLAIMED IS:

2 1. An article of manufacture for suspending
3 apertured items forwardly of a display shelf, said
4 article of manufacture comprising an integrally formed
5 elongated plastic strip subdivided into a mounting
6 portion and an item-supporting portion by a transversely-
7 extending fold line extending entirely across the width
8 of the strip to permit said mounting portion to be
9 disposed horizontally on the display shelf and said item-
10 supporting portion to be suspended vertically forwardly
11 of the display shelf, said mounting portion having an
12 upper edge remote from said fold line with an anchor
13 member extending therefrom, said anchor member including
14 a stem portion terminating in a transversely widened
15 anchor portion, and wherein said item-supporting portion
16 includes at least one finger-like member with a proximal
17 end secured to said strip and a remote end which can be
18 projected forwardly of said strip by bending said
19 finger-like member at said proximal end.

20 2. The article of manufacture according to Claim 1
21 wherein said anchor member includes at least one anchor
22 fold line for permitting the anchor to be resiliently
23 folded and inserted into a hole in said display shelf,

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1 wherein said anchor member is transversely wider than the
2 hole in said display shelf so as to engage the display
3 shelf at said hole.

4 3. The article of manufacture according to Claim 2
5 wherein said mounting portion includes a through hole to
6 permit said strip to be suspended from a hook inserted
7 through said through hole.

8 4. The article of manufacture according to Claim 3
9 wherein said mounting portion is coated on at least one
10 surface with adhesive means for securing said strip to
11 the display shelf.

12 5. The article of manufacture according to Claim 4
13 further comprising a plurality of said finger-like
14 members arranged in vertically spaced linear alignment,
15 all of said finger-like members being bendable forwardly
16 of said strip to support apertured items for display.

17 6. The article of manufacture according to Claim 5
18 wherein said finger-like members are defined by
19 respective inverted U-shaped die-cuts in said strip.

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1 7. The article of manufacture according to Claim 3
2 wherein said item-supporting portion includes a plurality
3 of said finger-like members arranged in vertically spaced
4 linear alignment all of said finger-like members being
5 bendable forwardly of said strip to support apertured
6 items for display.

7 8. The article of manufacture according to Claim 7
8 wherein said finger-like members are defined by
9 respective inverted U-shaped die-cuts in said strip.

10 9. The article of manufacture according to Claim 2
11 further comprising a plurality of said finger-like
12 members arranged in vertically spaced linear alignment,
13 all of said finger-like members being bendable forwardly
14 of said strip to support apertured items for display.

15 10. The article of manufacture according to Claim
16 9 wherein said finger-like members are defined by
17 respective inverted U-shaped die-cuts in said strip.

18 11. The article of manufacture according to Claim
19 2 wherein said mounting portion is coated on at least one
20 surface with adhesive means for securing said strip to
21 the display shelf.

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1 12. The article of manufacture according to Claim
2 11 further comprising a plurality of said finger-like
3 members arranged in vertically spaced linear alignment,
4 all of said finger-like members being bendable forwardly
5 of said strip to support apertured items for display.

6 13. The article of manufacture according to Claim
7 12 wherein said finger-like members are defined by
8 respective inverted U-shaped die-cuts in said strip.

9 14. An article of manufacture for suspending
10 apertured items forwardly of a display shelf, said
11 article of manufacture comprising an integrally formed
12 elongated plastic strip subdivided into a mounting
13 portion and an item-supporting portion by a transversely-
14 extending fold line extending entirely across the width
15 of the strip to permit said mounting portion to be
16 disposed horizontally on the display shelf and said item-
17 supporting portion to be suspended vertically forwardly
18 of the display shelf, said mounting portion having a
19 through hole to permit said strip to be suspended from a
20 hook mounted through said through hole, and wherein said
21 mounting portion is coated on at least one surface with
22 adhesive means for securing said strip to the display
23 shelf.

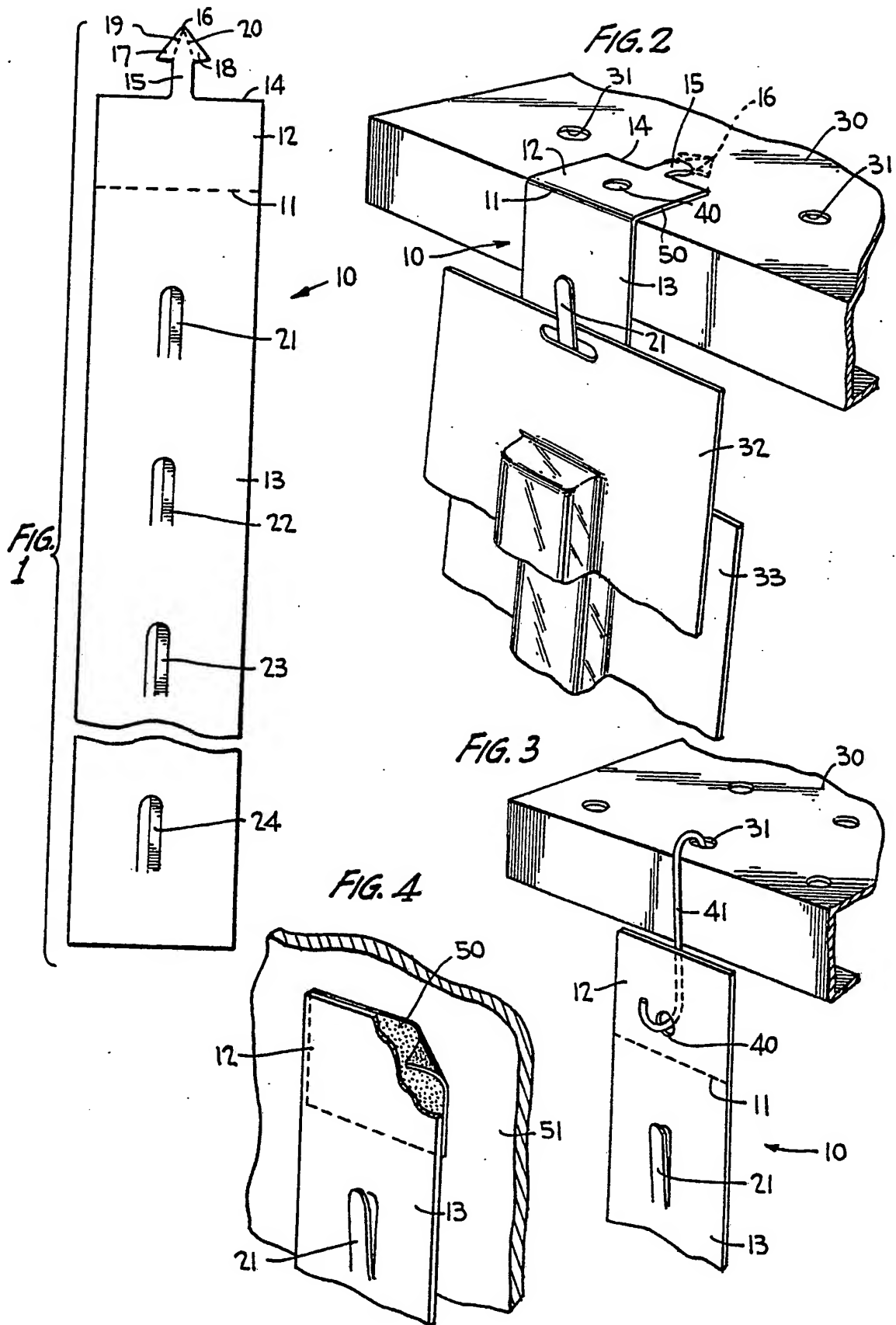
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1 15. The article of manufacture according to Claim
2 17 further comprising a plurality of said finger-like
3 members arranged in vertically spaced linear alignment,
4 all of said finger-like members being bendable forwardly
5 of said strip to support apertured items for display.

6 16. The article of manufacture according to Claim
7 15 wherein said finger-like members are defined by
8 respective inverted U-shaped die-cuts in said strip.

9 17. The article of manufacture according to claim
10 14 wherein said item-supporting portion includes at least
11 one finger-like member with a proximal end secured to
12 said strip at a remote end which can be projected
13 forwardly of said strip by bending said finger-like
14 member at said proximal end.

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INTERNATIONAL SEARCH REPORT

International Application No PCT/US 85/00569

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ³ According to International Patent Classification (IPC) or to both National Classification and IPC Int. Cl. ³ A47 H 1/10 U.S. Cl. 248/205.3																																
II. FIELDS SEARCHED <div style="text-align: center; border-top: 1px solid black; border-bottom: 1px solid black;">Minimum Documentation Searched ⁴</div> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 20%; border-bottom: 1px solid black;">Classification System</th> <th style="border-bottom: 1px solid black;">Classification Symbols</th> </tr> <tr> <td style="vertical-align: top; padding: 5px;">U.S.</td> <td style="padding: 5px;">248/467, 220.2, 221.3, 223.4, 224.4, 225.2, 317, 339, 214, 205.3, 311.2; 211/57.1, 59.1, 113, 86; 40/11R, 10R</td> </tr> </table> <div style="text-align: center; border-top: 1px solid black; border-bottom: 1px solid black;">Documentation Searched other than Minimum Documentation to the extent that such Documents are included in the Fields Searched ⁵</div>			Classification System	Classification Symbols	U.S.	248/467, 220.2, 221.3, 223.4, 224.4, 225.2, 317, 339, 214, 205.3, 311.2; 211/57.1, 59.1, 113, 86; 40/11R, 10R																										
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III. DOCUMENTS CONSIDERED TO BE RELEVANT ¹⁴ <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 10%; border-bottom: 1px solid black;">Category [*]</th> <th style="border-bottom: 1px solid black;">Citation of Document, ¹⁶ with indication, where appropriate, of the relevant passages ¹⁷</th> <th style="width: 15%; border-bottom: 1px solid black;">Relevant to Claim No. ¹⁸</th> </tr> <tr> <td style="vertical-align: top; padding: 5px;">A</td> <td style="padding: 5px;">US, A, D193,919, (Meyers et al) 23 October 1962</td> <td style="vertical-align: top; padding: 5px;">1-17</td> </tr> <tr> <td style="vertical-align: top; padding: 5px;">A</td> <td style="padding: 5px;">US, A, 2,264,957, (Shafarman) 02 December 1941</td> <td style="vertical-align: top; padding: 5px;">1-17</td> </tr> <tr> <td style="vertical-align: top; padding: 5px;">Y</td> <td style="padding: 5px;">US, A, 2,628,054, (Fazakerly) 10 February 1953</td> <td style="vertical-align: top; padding: 5px;">14</td> </tr> <tr> <td style="vertical-align: top; padding: 5px;">Y</td> <td style="padding: 5px;">US, A, 3,913,876, (McSherry) 21 October 1975</td> <td style="vertical-align: top; padding: 5px;">14</td> </tr> <tr> <td style="vertical-align: top; padding: 5px;">A</td> <td style="padding: 5px;">US, A, 4,106,741, (Hogg) 15 August 1978</td> <td style="vertical-align: top; padding: 5px;">1-17</td> </tr> <tr> <td style="vertical-align: top; padding: 5px;">A</td> <td style="padding: 5px;">US, A, 4,217,986, (Brown) 19 August 1980</td> <td style="vertical-align: top; padding: 5px;">1-17</td> </tr> <tr> <td style="vertical-align: top; padding: 5px;">A</td> <td style="padding: 5px;">US, A, 4,239,167, (Lane) 16 December 1980</td> <td style="vertical-align: top; padding: 5px;">1-17</td> </tr> <tr> <td style="vertical-align: top; padding: 5px;">A</td> <td style="padding: 5px;">US, A, 4,380,324, (Woesler) 19 April 1983</td> <td style="vertical-align: top; padding: 5px;">1-17</td> </tr> <tr> <td style="vertical-align: top; padding: 5px;">Y</td> <td style="padding: 5px;">US, A, 4,417,710, (Adair) 29 November 1983</td> <td style="vertical-align: top; padding: 5px;">14</td> </tr> </table>			Category [*]	Citation of Document, ¹⁶ with indication, where appropriate, of the relevant passages ¹⁷	Relevant to Claim No. ¹⁸	A	US, A, D193,919, (Meyers et al) 23 October 1962	1-17	A	US, A, 2,264,957, (Shafarman) 02 December 1941	1-17	Y	US, A, 2,628,054, (Fazakerly) 10 February 1953	14	Y	US, A, 3,913,876, (McSherry) 21 October 1975	14	A	US, A, 4,106,741, (Hogg) 15 August 1978	1-17	A	US, A, 4,217,986, (Brown) 19 August 1980	1-17	A	US, A, 4,239,167, (Lane) 16 December 1980	1-17	A	US, A, 4,380,324, (Woesler) 19 April 1983	1-17	Y	US, A, 4,417,710, (Adair) 29 November 1983	14
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<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>[*] Special categories of cited documents: ¹⁵</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"Δ" document member of the same patent family</p> </div> </div>																																
IV. CERTIFICATION <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border-bottom: 1px solid black; padding: 5px;"> Date of the Actual Completion of the International Search ² 24 April 1985 </td> <td style="width: 50%; border-bottom: 1px solid black; padding: 5px;"> Date of Mailing of this International Search Report ² 02 MAY 1985 </td> </tr> <tr> <td style="border-bottom: 1px solid black; padding: 5px;"> International Searching Authority ¹ ISA/US </td> <td style="border-bottom: 1px solid black; padding: 5px;"> Signature of Authorized Officer ²⁰ <div style="text-align: center;"> Ramon O. Ramirez </div> </td> </tr> </table>			Date of the Actual Completion of the International Search ² 24 April 1985	Date of Mailing of this International Search Report ² 02 MAY 1985	International Searching Authority ¹ ISA/US	Signature of Authorized Officer ²⁰ <div style="text-align: center;"> Ramon O. Ramirez </div>																										
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